Serial No.: 09/541,115 Filed: March 31, 2000

Page: 2

2. (Amended) The method of claim 1, further comprising determining an amount of prefetch data that has been read prior to completing reading all of the prefetch data; wherein determining comprises keeping track of the prefetch data as the prefetch data is read.

- 3. (Amended) The method of claim 1, further comprising determining an amount of prefetch data that has been read prior to completing reading all of the prefetch data; wherein determining comprises maintaining a count of prefetch data that has been read.
- 4. (Amended) The method of claim 1, wherein the demand data comprises data for a computer program and the prefetch data comprises data adjacent to the demand data.
- 5. (Amended) The method of claim 1, wherein the request for demand data is satisfied without substantial delay using the prefetch data.
- 6. (Amended) The method of claim 1, wherein, if the amount of prefetch data that has been read is not sufficient to satisfy the request for demand data, the method further comprises waiting for an amount of prefetch data to be read that is sufficient to satisfy the request for demand data.



Serial No.: 09/541,115 Filed: March 31, 2000

Page: 3

7. (Amended) The method of claim 1, further comprising:

receiving a second request for prefetch data, the prefetch data associated with the second request being out of sequence relative to the prefetch data associated with the first request for prefetch data; and

storing an amount of prefetch data that has been read in response to the first request up to a point at which the second request is received.

8. (Amended) An article comprising a machine-readable storage medium which stores executable instructions that cause a machine to:

read prefetch data in response to a request for prefetch data;

receive a request for demand data;\and

satisfy the request for demand data with prefetch data prior to completing reading all of the prefetch data.

9. (Amended) The article of claim 8, further comprising instructions to determine an amount of prefetch data that has been read prior to completing reading all of the prefetch data;

wherein determining comprises keeping track of the prefetch data as the prefetch data is read.

10. (Amended) The article of claim 8, further comprising instructions to determine an amount of prefetch data that has been read prior to completing reading all of the



Applicants: Knut S. Grimsrud, et

Serial No.: 09/541,115 Filed: March 31, 2000

Page: 4

prefetch data;

wherein determining comprises maintaining a count of prefetch data that has been read.

11. (Amended) The article of claim 8, wherein the demand data comprises data for a computer program and the prefetch data comprises data adjacent to the demand data.

12. (Amended) The article of claim 8, wherein the request for demand data is satisfied without substantial delay using the prefetch data.

13. (Amended) The article of claim 8, wherein, if the amount of prefetch data that has been read is not sufficient to satisfy the request for demand data, the instructions cause the machine to wait for an amount of prefetch data to be read that is sufficient to satisfy the request for demand data.

14. (Amended) The article of claim 8, further comprising instructions that cause the machine to:

receive a second request for prefetch data, the prefetch data associated with the second request being out of sequence relative to the prefetch data associated with the first request for prefetch data; and

store an amount of prefetch data that has been read in response to the first request up to a point at which the second request is received.

X

Serial No.: 09/541,115 Filed: March 31, 2000

Page : 5

15. (Amended) An apparatus comprising:

a memory which stores executable instructions; and

a processor which executes the instructions to:

read prefetch data in response to a request for prefetch data;

receive a request for demand data; and

satisfy the request for demand data with prefetch data prior to completing reading all of the prefetch data.

16. (Amended) The apparatus of claim 15, wherein the processor executes instructions to determine an amount of prefetch data that has been read prior to completing reading all of the prefetch data; and

wherein determining comprises keeping track of the prefetch data as the prefetch data is read.

17. (Amended) The apparatus of claim 15, wherein the processor executes instructions to determine an amount of prefetch data that has been read prior to completing reading all of the prefetch data; and

wherein determining comprises maintaining a count of prefetch data that has been read.

18. (Amended) The apparatus of claim 15, wherein the demand data comprises



Applicants: Knut S. Grimsrud, et al.

Serial No.: 09/541,115 Filed: March 31, 2000

Page: 6

data for a computer program and the prefetch data comprises data adjacent to the demand data.

19. (Amended) The apparatus of claim 15, wherein the request for demand data is satisfied without substantial delay using the prefetch data.

20. (Amended) The apparatus of claim 15, wherein, if the amount of prefetch data that has been read is not sufficient to satisfy the request for demand data, processor executes instructions to wait for an amount of prefetch data to be read that is sufficient to satisfy the request for demand data.

21. (Amended) The apparatus of claim 15, wherein the processor executes instructions to:

receive a second request for prefetch data, the prefetch data associated with the second request being out of sequence relative to the prefetch data associated with the first request for prefetch data; and

store an amount of prefetch data that has been read in response to the first request up to a point at which the second request is received.--

Please add new claims 22 to 42, as follows:

22. (New) A method comprising:





Serial No.: 09/541,115 Filed: March 31, 2000

Page :

reading data in response to a request for a predetermined amount of data, the predetermined amount of data comprising prefetch data and demand data, the demand data comprising data for a computer program and the prefetch data comprising data adjacent to the demand data;

Attorney Docket No.: 10559/142001/P7712

determining an amount of data that has been read prior to completing reading the predetermined amount of data; and

satisfying a request for the demand data based on the amount of data that has been read prior to completing reading the predetermined amount of data;

wherein, if the amount of data that has been read is not sufficient to satisfy the request for the demand data, the method further comprises waiting for an amount of data to be read that is sufficient to satisfy the request for the demand data.

- 23. (New) The method of claim 22, wherein determining comprises keeping track of the data as the data is read.
- 24. (New) The method of claim 22, wherein determining comprises maintaining a count of data that has been read.
 - 25. (New) A method comprising:

reading data in response to a request for a first predetermined amount of data;

determining an amount of data that has been read prior to completing reading the first predetermined amount of data;







Applicants: Knut S. Grimsrud, et al.

Serial No.: 09/541,115 Filed: March 31, 2000

Page : 8

receiving a second request for a second predetermined amount of data, the second predetermined amount of data being out of sequence relative to the first predetermined amount of data; and

storing an amount of data that has been read up to a point at which the second request is received.

26. (New) The method of claim 25, wherein the first and second predetermined amounts of data comprise different sets of prefetch data and demand data, the demand data comprising data for a computer program and the prefetch data comprising data adjacent to the demand data.

27. (New) The method of claim 26, wherein the second request is for demand data; and

the method further comprises:

reading prefetch data in response to the second request; and
satisfying the second request with prefetch data prior to completing reading all of
the prefetch data in response to the second request.

28. (New) An article comprising a machine-readable storage medium that stores executable instructions to:

read data in response to a request for a predetermined amount of data, the predetermined amount of data comprising prefetch data and demand data, the demand data



Applicants: Knut S. Grimsrud, et al.

Serial No.: 09/541,115 Filed: March 31, 2000

Page :

comprising data for a computer program and the prefetch data comprising data adjacent to the demand data;

determine an amount of data that has been read prior to completing reading the predetermined amount of data;

satisfy a request for the demand data based on the amount of data that has been read prior to completing reading the predetermined amount of data; and

wait for an amount of data to be read that is sufficient to satisfy the request for the demand data if the amount of data that has been read is not sufficient to satisfy the request for the demand data.

- 29. (New) The article of claim 28, wherein determining comprises keeping track of the data as the data is read.
- 30. (New) The article of claim 28, wherein determining comprises maintaining a count of data that has been read.
- 31. (New) An article comprising a machine-readable storage medium that stores executable instructions to:

read data in response to a request for a first predetermined amount of data;

determine an amount of data that has been read prior to completing reading the first predetermined amount of data;

receive a second request for a second predetermined amount of data, the second





Applicants: Knut S. Grimsrud, et

Serial No.: 09/541,115 Filed: March 31, 2000

Page : 10

predetermined amount of data being out of sequence relative to the first predetermined amount of data; and

store an amount of data that has been read up to a point at which the second request is received.

- 32. (New) The article of claim 31, wherein the first and second predetermined amounts of data comprise different sets of prefetch data and demand data, the demand data comprising data for a computer program and the prefetch data comprising data adjacent to the demand data.
- 33. (New) The article of claim 32, wherein the second request is for demand data; and

the article further comprises instructions to:

read prefetch data in response to the second request; and

satisfy the second request with prefetch data prior to completing reading all of the prefetch data in response to the second request.

- 34. (New) An apparatus comprising:
- a memory which stores machine-executable instructions; and
- a processor which executes the instructions to:

read data in response to a request for a predetermined amount of data, the predetermined amount of data comprising prefetch data and demand data, the





Applicants: Knut S. Grimsrud, et al.

Serial No.: 09/541,115 Filed: March 31, 2000

Page : 11

demand data comprising data for a computer program and the prefetch data comprising data adjacent to the demand data;

determine an amount of data that has been read prior to completing reading the predetermined amount of data; and

satisfy a request for the demand data based on the amount of data that has been read prior to completing reading the predetermined amount of data;

wherein, if the amount of data that has been read is not sufficient to satisfy the request for the demand data, the processor executes instructions to wait for an amount of data to be read that is sufficient to satisfy the request for the demand data.

- 35. (New) The apparatus of claim 34, wherein determining comprises keeping track of the data as the data is read.
- 36. (New) The apparatus of claim 34, wherein determining comprises maintaining a count of data that has been read.
 - 37. (New) An apparatus comprising:
 - a memory which stores machine-executable instructions; and
 - a processor which executes the instructions to:

read data in response to a request for a first predetermined amount of data; determine an amount of data that has been read prior to completing reading





Serial No.: 09/541,115 Filed: March 31, 2000

Page : 12

the first predetermined amount of data;

receive a second request for a second predetermined amount of data, the second predetermined amount of data being out of sequence relative to the first predetermined amount of data; and

store an amount of data that has been read up to a point at which the second request is received.

- 38. (New) The apparatus of claim 37, wherein the first and second predetermined amounts of data comprising different sets of prefetch data and demand data, the demand data comprising data for a computer program and the prefetch data comprising data adjacent to the demand data.
- 39. (New) The apparatus of claim 38, wherein the second request is for demand data; and

the processor executes instructions to:

read prefetch data in response to the second request; and

satisfy the second request with prefetch data prior to completing reading all of the prefetch data in response to the second request.

40. (New) An apparatus comprising circuitry to:

read prefetch data in response to a request for prefetch data;

receive a request for demand data; and





Applicants: Knut S. Grimsrud, et al.

Serial No.: 09/541,115 Filed: March 31, 2000

Page : 13

satisfy the request for demand data with prefetch data prior to completing reading all of the prefetch data.

RX

41. (New) (Amended) The apparatus of claim 40, wherein, if the amount of prefetch data that has been read is not sufficient to satisfy the request for demand data, the circuitry waits for an amount of prefetch data to be read that is sufficient to satisfy the request for demand data.

42. (New) (Amended) The apparatus of claim 40, wherein the circuitry:

receives a second request for prefetch data, the prefetch data associated with the second request being out of sequence relative to the prefetch data associated with the first request for prefetch data; and

stores an amount of prefetch data that has been read in response to the first request up to a point at which the second request is received. - -



X.